

AN ROINN OIDEACHAIS.

(Department of Education).

BRAINNSE AN MHEADHON-OIDEACHAIS

(Secondary Education Branch).

INTERMEDIATE CERTIFICATE EXAMINATION, 1939.

LOWER COURSE.

SCIENCE (Syllabus D).

FRIDAY, 16th JUNE.—AFTERNOON, 4 TO 6 P.M.

[Not more than *six* questions to be attempted. All the questions are of equal value. Illustrate your answers wherever possible.]

1. Describe experiments you have seen to show that
 - (a) air exerts pressure ;
 - (b) air takes up space ;
 - (c) air exerts pressure in all directions.
2. State the changes that take place, giving the reasons for each change, when a beaker of cold water is gradually heated to boiling point.
3. What is an oxide ? Describe the oxides of Magnesium, Sulphur and Phosphorus. Name, and give the composition of three oxides found in the home.
4. A lighting candle gradually disappears, while a metal strongly heated in air usually increases in weight. Explain those facts. Support your answer by any demonstrations you have seen carried out.
5. Explain how breathing occurs. What interchange takes place between the blood and the body cells.
6. What is a lactometer ? Explain the principle upon which it is constructed and state how it is used.
7. What do you understand by (a) ten degrees of frost, (b) ten degrees below zero ? Explain why ice forms on the surface and not at the bottom of a pond of water.

8. Describe in detail how clean dry samples of chalk and salt may be obtained from a mixture of both.

9. Tell how you would treat the following : -

- (a) a sprained wrist ;
- (b) a scalded foot ;
- (c) bleeding from the nose,
- (d) a girl who has fainted.

10. Explain in detail the part played by the skin in regulating the body temperature.

11. Define Latent heat and give four examples of how Latent heat affects the life and work of man.

12. Describe the gas carbondioxide. How would you show the presence of this gas in the atmosphere ? Name three distinct sources from which the atmosphere gains carbondioxide.